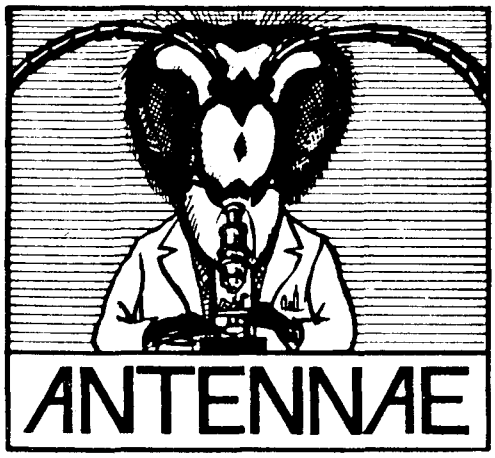

Unlikely Facts & Explanations

The Boggle Threshold

By Renée Haynes

IT IS USEFUL to look at reactions to psychical research in terms of what may be called the Boggle Threshold, the point at which the mind boggles . . . a concept which can be linked up neatly with that of the more familiar pain threshold by William James's shrewd remark that there is no pain like the pain of a new idea. The one is connected with physiological ease, the other with psychological ease. Both are lowered by fear and anxiety.

THIS *is one of a series of columns planned by* ARTHUR KOESTLER, *for which he acts as editorial adviser; his article "Horizons in Space" inaugurated the series in the October 1979 issue. It seems that "the new frontier" lies not between the sciences and the humanities, but on the peripheries of contemporary science itself. This department is mainly concerned with those border areas, from cosmology to psychology, which are of special relevance to both cultures.*

RENÉE HAYNES *is a novelist, historian, and writer on parapsychology, and has since 1970 edited the Journal and Proceedings of the Society for Psychical Research in London. Her books include "The Philosopher King: Pope Benedict XIV" (Weidenfeld, 1970) and "The Seeing Eye" (Hutchinson, 1976).*

The pain threshold varies from one person to another, probably from one culture to another and quite certainly in varying circumstances. The higher its level, the longer it takes for its owner to become conscious of pain, to realise that he personally is being hurt; and this even though his body may already have been moved to some reflex action to deal with the trouble, like blinking at strong light, or automatically slapping a mosquito as it settles on a bare leg before biting. This level is probably higher among extraverts than among introverts. It is known to be higher in primitive communities than in sophisticated peoples. It was for instance very high indeed in certain Red Indian tribes, and also among the Australian and Australasian aborigines observed by T. H. Huxley when serving as assistant surgeon and naturalist on HMS *Rattlesnake*'s four-and-a-half year cruise to survey the reefs between Australia and Borneo. Huxley noted with lively interest that some of them were walking about apparently untroubled by open wounds and sometimes even broken bones, injuries that would have crippled the European sailors of the day, tough though they were.[1] The pain threshold also varies in one individual at different times and in different circumstances; thus soldiers in the heat of battle often fight on without noticing they have been hurt, and, more peacefully, a man absorbed in interesting work does not become aware of toothache till he goes to bed.

Where the pain threshold concerns the interaction of the body with the psyche brought about by some physical stimulus, the Boggle Threshold concerns the interaction between the psyche and the mind brought about by some intellectual stimulus, the impact of some awkward unknown fact or idea. Both are biologically useful, within limits. Physical suffering that rises above the pain threshold warns the sufferer to do something about its cause: to go to the dentist, to bandage a blistered heel, to rest a broken limb. He should neither ignore it nor become a hypochondriac. The mental suffering, shock, or anxiety generated by an awareness of something unexplained that rises above the boggle threshold also warns the sufferer to do something about its cause. A sudden growl in tropical undergrowth, the sight of a strange light skimming through the dark sky, must put a man on the alert. His bodily survival may depend on getting away from a wild animal or avoiding a bomb. His intellectual equilibrium may similarly depend on his ability to find out the origin, the meaning, the possible consequences of a totally unexpected event or a completely alien idea: to discover whether it

[1] My grandmother, T. H. Huxley's eldest daughter, who had been devoted to him and remembered vividly his sayings and doings, often discussed this episode and its implications with me when I was growing up.

PRODUCED 2005 BY UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

can be fitted into what he already knows about; whether there is a perfectly comprehensible explanation; whether someone is lying to him for ulterior motives (as smugglers used to fabricate "haunts" to safeguard their own activities, as Victorian nursemaids used to threaten naughty children with bogies, as a con-man offers gilt for gold); or whether he has to face the appalling insecurity of realising that his working model of the nature of things is inadequate. The alternative is to reject fact and idea alike in self-protective rage.

IT IS NECESSARY for human beings to try to make sense of everything that happens, to account in comprehensible, logical terms for all that goes on. Though thunder may in one time and place be labelled *the Hammer of Thor*, and in another "an electrical phenomenon", in each case the fact that it has been given a diagnosis and fitted into an existing pattern begins to dispel the panic of confronting total mystery, the paralysing terror that the universe is ultimately incomprehensible, and that human experience reflects nothing but a meaningless jostle of events, "one damn thing after another. . . ."

To prevent this near breakdown of reason among those who cannot suspend judgment but must have instant certainty, existing concepts are often elaborated with ever-increasing elegance and complexity—as happened with that beautiful off-beam work of art, Ptolemaic astronomy—and interconnected with ever-increasing precision. In the end it is as if dwarfs deep in the caverns of the mind were forging and assembling such concepts into inflexible, impenetrable suits of intellectual armour to defend timid champions of thought against *anything* new; as if, like late medieval knights so heavily encased in mail that once thrown to ground they could not get up again, their minds were made powerless by the weight of the carefully linked concepts constructed to protect them, and their tempers were correspondingly brought to the boil as they lie on their backs kicking and clashing their steely legs.

THE BOGGLE THRESHOLD can be seen in action in pretty well every human context. In the most primitive of all it can apparently be so high as to prevent people so much as perceiving something totally unfamiliar and incomprehensible; as happened when the Australian aborigines apparently failed to see Captain Cook's ship, the *Endeavour*, when she anchored within half-a-mile of them in April 1770. They completely ignored her presence, but when boats were lowered they reacted instantly. They knew what boats were; they made and used their own.

At a slightly more advanced stage of development, the Boggle Threshold may involve the rejection of a new idea, and the reinterpretation of its embodiment in old terms: as when members of another primitive culture, faced with a working railway engine, rejected (or perhaps more simply, ignored) the idea of a self-moving machine in favour of the belief that this object was a god, and that its spirit could possess its devotees. (Did the minds of small boys work like this as they rushed about whistling and puffing in the days of steam trains?)

A similar mental process moved the learned Lavoisier to reject eye-witness accounts of the fall of meteorites, for the sound commonsense reason that "stones cannot fall from the sky as there are no stones in the sky."[2] As he had not seen such events for himself he was able to dismiss reports of them as fraudulent or superstitious or deluded, or all three. Even if he *had* seen them for himself he might well have rejected later on his memory of what had happened; there are several instances on record in which the boggled mind in its discomfort has worked retrospectively to obliterate the impression of an event that "could not possibly have happened", or to reinterpret it as a mistake, an illusion, a fever dream.

Lavoisier's near-contemporary, the ecclesiastical lawyer-scientist-historian Prospero Lambertini (who became Pope Benedict XIV) was more cautious; he defended Livy against those who accused him of credulity in describing a shower of stones, advanced a possible natural explanation, and wrote firmly that it was wrong to assume *either* that reports of unusual occurrences were false *or* that the occurrences were miraculous.[3]

Later examples of a low Boggle Threshold are to be found in those 19th-century doctors who confidently ascribed to "shamming" the fact that a patient had shown no sign of pain while having his leg amputated under hypnotic anaesthesia; and more recently in the reaction of a very intelligent old lady to some horrifying coloured pictures of members of an isolated African tribe who had inherited a gene producing two-toed feet.[4] She insisted for a while that such things *could not* happen, and that the people photographed must be wearing lobster-clawed appliances over normal

[2] Lavoisier is said to have made this remark in 1768. On 13 September of that year a very hot stone was seen and heard to fall from the sky with a whistling noise by some of the inhabitants of the French village of Lucé. The local Abbé sent a piece of it to the Académie des Sciences in Paris, of which Lavoisier was a distinguished member. Disregarding the eyewitness evidence, he and his colleagues decided it was an ordinary stone that had been struck by lightning.

[3] Prospero Lambertini, *De Servorum Dei Beatificazione et de Beatorum Canonizatione* (Bologna, 1738). See also Renée Haynes, *Philosopher King, the Humanist Pope Benedict XIV* (London, 1970).

[4] *Sunday Times* Colour Supplement, 13 January 1980.

PRODUCED 2005 BY UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

limbs. She finally yielded to persuasion; but as in many instances of this kind there lingered an echo of that ancient rhyme:

A man convinced against his will
Is of the same opinion still.

INDIVIDUAL BOGGLE THRESHOLDS will vary, of course, with individual temperament, history, training, and aptitude. They will also be influenced by those of the groups to which each individual is linked: family, friends, school, employment, university. In people brought up in the discipline of the physical sciences the levels of boggledom are likely to differ considerably from the levels found in those brought up in the humanities. Members of the first school may well react sharply, for instance, against evidence that some unknown animal exists; rightly in the case of "men whose heads do grow beneath their shoulders", wrongly in the cases of the anthropophagi, the gorilla, and the okapi, and who knows with what justification in the cases of the Abominable Snowman and the Loch Ness Monster. On the other hand, humanities students—like me—may tend to ignore or to reject mathematical generalisations about living creatures, especially people, rather as Disraeli rejected "lies, damned lies and statistics" to which might now be added computer-judgments. (Consciously and conscientiously one may attempt to raise one's own level; but the instant gut-reaction persists and has to be taken into account.)

Again, the Boggle Thresholds of those who read the "heavies"—*The Times*, *The Guardian*, *The Observer*—will be lower in some respects and higher in others than the Boggle Thresholds of those who read "the pops." The former may accept sociological forecasts without adverse reaction; the latter may not jib at the astrological predictions for their birthdays (unless of course these are very disagreeable). Moreover, a bland assumption that something can be taken for granted, accepted as *fact*, will have a powerful effect on all groups, from the academic to the barely literate. Recall Charles II's request that the learned members of the newly founded Royal Society for the Advancement of Science should find out why it was that if you put goldfish into a brimming bowl of water it did not overflow. Various members came to the next meeting with carefully worked out theoretical explanations. But the King was there, with a bowl and some goldfish; and as he slipped them gently in, it was plain to be seen that the water dripped correspondingly out. No one had questioned the basis of the scientific enquiry made by that earnest Royal seeker after truth.

And yet again the Boggle Threshold is influenced profoundly by the epoch in which a man lives: its rooted assumptions, its current ideas, the whole temporal landscape. This is particularly important in connection with psychical research. As long as its disconcerting raw materials—telepathy, clairvoyance, time-displacement in the form of precognition or retrocognition, psychokinesis observed as the inexplicable movement of objects or people—could be accommodated in the very loosely woven general hypothesis attributing them to the activities of invisible beings, it was intellectually possible to accept them as real, and to discuss them with some equanimity, as St Augustine did, within the cosmology of his time.

The Roman Emperors themselves had been afraid of sorcerers, witches, astrologers; Tiberius drove these last underground (and had considerable difficulty later on, when he wanted to consult one). Then ancient Rome disintegrated, and the consequent chaos intensified old fears. The influx of barbarian tribes with their savage, primitive rites and beliefs whipped them into a terror of all invisible beings but God, the angels, and the saints. The Boggle Threshold was high but fright made it almost impossible to investigate fact. The hypothesis held good, but most of the "invisibles" it involved were assumed to be powerfully and fatally evil.

THE PANIC DIMINISHED as the slow generations went by. Towards the end of the Dark Ages Isidore of Seville could write an encyclopaedia[5] examining with detachment various forms of magic; and noting with regard to religious revelation that there are three kinds of vision—through the eyes of the body, through the eyes of the mind, and through the soul's imagination. By the 13th century Thomas Aquinas could note that "natural prophecy" was associated with certain temperaments and certain situations and could even be observed in animals.[6] It can still be seen in them probably as telepathy and as clairvoyance (in so far as direction-finding is concerned), and certainly in the precognition of earthquakes (now ascribed to special sensitivity to changes in the earth's magnetic field). The way lay open to the discovery of *psi* in its biological aspects: and it was followed for years until a sudden change, a self-defensive change in the Boggle Threshold took place.

That great plague, the Black Death, reactivated terror: terror transformed itself into rage; rage exploded into persecution, especially the persecution of witches, to whose cooperation with malevolent spirits all evils could be ascribed. The growth of mathematical thinking and the swift

[5] Isidore of Seville (560–636), *Etymologiae*. Cited by Lynn Thorndyke in *A History of Magic and Experimental Science* (New York, 1923).

[6] Thomas Aquinas, *Summa Theologica: De Veritate*.

PRODUCED 2005 BY UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

development of technology then brought into being a new framework of thought, blessedly unemotional, blessedly objective, blessedly amenable to independent checking. With this there arose the assumption that the universe could be envisaged as a vast complex machine: an analogy increasingly popular and powerful in which there was no room for "spirits." This, of course, ruled out the working hypothesis which had previously accommodated most *psi* phenomena; and made it very difficult to acknowledge their existence. Because they did not fit into the new pattern of explanation, or, worse still, because they might threaten its adequacy, the evidence for them was ascribed to fraud, delusion, or superstition. This was safer than admitting even the remote possibility that any occurrence could contravene the painfully established "laws of nature." It was as if an inscription over the gates of science should run: *No Observation without Explanation*; and another over the turnstiles should read: *Facts not admitted unless accompanied by respectable Hypotheses. Should the latter fail to satisfy the authorities, both will be requested to leave the premises immediately.*

Bold persons who tried to dodge such edicts, and to draw official attention to freshly observed data by dressing them up in some unreliable or out-of-fashion scientific idiom, laboured in vain. Because their verbal clothing was—rightly—not accepted, the data themselves were rejected; it was as if some expert with much to contribute were to be thrown out of a conference, bag and baggage, because he wore knee-breeches. The most vivid example of this is the case of poor Mesmer, whose discoveries about hypnosis were unfortunately put forward in terms of "animal magnetism." Directly a scientific committee headed by Benjamin Franklin correctly pronounced that magnetism as such was not involved, the facts were kicked away with the formula.

BOTH classical and medieval writers (Aristotle and Aquinas for instance) had noted that extrasensory experiences occurred much more often among the illiterate than among thinkers trained to concentrate attention on whatever matter was at hand, ignoring all irrelevant and distracting impressions in general. Now they also began to be conditioned to reject—if it *should*, improbably, happen—awareness of *psi* phenomena in particular; these above all must not be allowed to overflow into consciousness, lest they should carry with them the germs of "chaos and old night."

THE BOGGLE THRESHOLD sank to an unprecedented depth among intellectuals, a depth soon so widely accepted by the majority of educated people as to become a status symbol, social as well as academic, though poets, painters, women and romantics, a few philosophers and some theologians were not affected to the same extent. It is, incidentally, fascinating that the whole concept of the Boggle Threshold was first set out in a theological context under the name of "invincible ignorance"—the state of a man whose entire intellectual and emotional inheritance, background, education and training made it impossible for him to understand or accept Christianity, a state for which he could not be held responsible. In this same context, it is also plain to see how heavily verbal misunderstanding may weigh the Boggle Threshold down; as in the case of the Victorian scientist who protested that angels could not exist, because they would need chests like pouter pigeons if their bone structure had to support the weight of their wings. He had no idea that by an angel was meant a non-physical being whose presence could make itself known by evoking a visual image in the human mind.

The rise and spread of Spiritualism in the middle of the 19th century provoked in the scientific Establishment a shudder painful as that of a snail of one species when it is struck by a love-dart from another of an alien kind. The whole thing seemed to be bogus, in very bad taste, and what used to be called Non-U. It was largely accepted by uncritical, unscientific, undistinguished people with a vague genteel vocabulary, who put forward terribly naive theories to account for what was alleged to go on, and often did not concern themselves to investigate the truth of those allegations.

The movement had begun in 1848 with a poltergeist haunting in the Fox household at Hydesville, Arcadia, New York; and it seems for a while to have conformed to the pattern of such outbreaks. These usually start with a spontaneous explosion of phenomena: with strange noises, rappings, the inexplicable movement of objects (from stones to saucepans to heavy furniture) and in our own day with electrical equipment going berserk, as happened in the famous Rosenheim case in 1967–68.[7] These phenomena take place for the most part around one person (and very occasionally around two persons deeply involved with one another, as a mother and daughter may be). It looks as if they are connected with some very profound emotional disturbance, whose cause cannot always be pinpointed, though frustration, repressed anger, and the somatopsychic stresses of puberty are often suspect. The external disturbance often eases the internal one; but its unconscious source, the "poltergeist-focus" who has come to enjoy the excitement generated within the household and the attention directed upon it, often

[7] Originally reported in *Grenzgebiete der Wissenschaft*, ed. Dr Hans Benda (Freiburg im Bresgau). English translation by Manfred Cassirer in *The Journal of Paraphysics* (No. 24, 1968).

PRODUCED 2005 BY UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

feels impelled to keep things going, and since the original energy has evaporated past recall uses the perfectly normal methods of conscious faking. Investigators then move in, discover what is being done, discount the evidence of what happened in the first place, and glibly attribute everything to fraud.

The archetypal instance of this occurred with Frank Podmore, an early member of the Society for Psychical Research, who looked into a few outbreaks that were in the final stage and came up with the useful theory that all such happenings could be attributed to the tricks of some "naughty little girl"! This remained popular for many years, despite the insistence of Andrew Lang, an anthropologist President of the Society, that there was reliable evidence in many cases for the movement of objects far too heavy for any little girl to shift, however naughty she might be; that rappings and other noises had gone on when the suspect was in bed, closely watched; and that poltergeist upheavals had been recorded by reliable observers in many different parts of the world, often among people who had never heard of such occurrences. But the "naughty little girl" theory accorded too well with the boggle threshold of the time to be shifted. No one important took much notice of Lang's remarks; and Sir William Crookes' reports on what would now be called psychokinesis were rejected as "impossible." ("I never said it was possible", Crookes replied, "I said it was true.")[8]

INTELLECTUAL HACKLES will of course be less likely to rise, bringing their Boggle Thresholds behind them, if data so far unexplained can be fitted by way of analogy into a familiar network of everyday experience. Thus the whole concept of telepathy (already evidenced and set forth in that scholarly and well-documented piece of research, *Phantasms of the Living*[9]) has become more acceptable since "listening to the wireless" turned from a novelty into a habit over the last half-century or so, and the catch-phrase "brain waves" became a potent symbol. Even though successful experiments in telepathic transmission to people inside a "Faraday cage" (a room-sized hollow cube whose walls exclude electromagnetic waves and electrostatic effects, so that a radio set taken inside it will not work once the door has been shut) have shown the analogy to be extremely shaky, the implications of the symbol very hard to justify, the notion of extrasensory perception is much less likely than before to provoke contempt, automatic rejection, or *furor scholasticus*. And, interestingly enough, the phrase "thought transference", with its mechanist imagery so eminently respectable in the 1880s, has sunk without trace.

On a rather firmer basis, advances in psychosomatic medicine have made it possible to accept in a new framework of ideas data to which the usual late-Victorian boggle threshold reacted by crashing like a broken lift into the basement. Where a century ago the average educated man rejected with intellectual rage (and some social superiority) any and all reports of witchcraft at work in producing sickness, accident, or even death, his modern counterpart can accept and investigate them in connection with what is already known about the effects of powerful suggestion.[10]

IT HAD BEEN HOPED quite early on in modern psychical research to lower the scientific boggle threshold by carrying out experiments whose results could be evaluated in statistical terms, and compared with those that might have been expected by pure chance. This kind of quantitative work, begun in England and France, was enormously extended by Dr J. B. Rhine in the United States during the 1930s,[11] and by others in various parts of the world as time went on. The effect was patchy. There were those who could not accept the useful, paranoid, overall theory that large numbers of university men and women in different countries were engaged in a vast conspiracy to deceive the public. But there were all too many others who, though they might not have formulated their thoughts in this way, tacitly inclined towards it, for two main reasons.

One was the predictable reaction that the experiments had not been carried out properly, that the proper protocol had not been observed, that not enough or adequate safeguards had been used, or if used, enforced; that the statistical methods employed were unsatisfactory; and basically, that as the results could not be true, carelessness, misrepresentation or fraud *must* be postulated.

The other reason was that the experiments were not strictly replicable, would not yield the same results whenever and wherever and by whomever they were carried out. The "decline effect"—which came of intense boredom with hours of guessing which of several meaningless designs was to be envisaged, and showed at any rate that the *psi*

[8] See R. G. Medhurst, K. M. Goldney, and M. R. Barrington, *Crookes and the Spirit World* (London, 1972). Sir William Crookes, FRS, OM, served as President of the Society for Psychical Research in 1896-97 and as President of the Royal Society for 1898.

[9] Edmund Gurney, F. W. H. Myers, and Frank Podmore, *Phantasms of the Living* (London, 1886).

[10] These were explored in a fascinating correspondence in the *British Medical Journal* on and off throughout the 1960s, in Dr J. C. Barker's book *Scared to Death* (London, 1968) and in Dr Stephen Black's *Mind and Body* (London, 1969).

[11] See, for instance, J. B. Rhine, *Extra Sensory Perception* (Boston, 1934), *The Reach of the Mind* (London, 1948), and, with J. G. Pratt, *Parapsychology* (London, 1968).

PRODUCED 2005 BY UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

faculty, unlike conjuring, was inhibited rather than perfected by repetition—appeared sooner or later in the records of even the most successful subjects. All subjects, moreover, tended to achieve more significant scores with some experimenters—cheerful, extrovert, enthusiastic—than with shy, cautious academics. It does not seem to have occurred to anyone for some time that experiments eminently suitable for research in the physical sciences were not necessarily the best models for experiments to test a faculty with deep biological roots.

PERHAPS I SHOULD state that my motto is *not* Down with the Boggle Threshold! It is normal, necessary, and useful in every context—and in that of psychical research it is essential if the line is to be drawn between mystery and mystagogy, as indispensable a piece of work as to trace that separating mathematics from numerology. The existence of this threshold, however, needs to be recognised and reckoned with, its level needs to be examined consciously and constantly, and kept low enough for the mind to admit evidence for hard angular facts, however difficult it may be to fit them into an existing pattern. It should, on the other hand, be kept high enough to eliminate "explanations" that are no more than phosphorescent verbiage (like an overheard definition of the aura as "*The Be-ness of Non-Being*", presumably in the speaker's bonnet), and to reject hypotheses that do not bear testing and the wilder vagaries of science fiction or of "occult thrillers" presented as fact.

How Is It?

How is it, when those alone
With imaginary sparse beards, those
Antique atavists, those short of intellect
And breath, go on believing now
They will be living
After death?

How is it, when we know our marvellous
Mechanism, without pulse of blood, breaks
In decay, though orientated by the toes
To an impossible
Resurrection Day?

How is it, when we know there will be no
Future hunting, no need for real or token
Steeds in our graves, Château Yquem in beakers,
Or clay
Female slaves,

How is it then, that past the obit in *The Times*
Among the cemetery lines, we bend,
Read, revere, it seems, only that
Invisible husk which now is no
More than
Calcium and dust?

Geoffrey Grigson

PRODUCED 2005 BY UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED